IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1-3. (Canceled).

4. (Currently Amended) An amplification apparatus that has a nonlinear high-frequency power amplifier that amplifies a first input signal; and a power supply voltage control section that forms a control signal for controlling a power supply voltage of said high-frequency amplifier based on a second input signal; and that amplifies a signal level of said first input signal by way of said high-frequency power amplifier to a level in accordance with said second input signal, wherein said power supply voltage control section comprises:

an adder that adds together said second input signal and a negative feedback signal;

an integrator that integrates an output of said adder;

a quantizer that quantizes an output of said integrator in accordance with a predetermined threshold value;

a low pass filter that eliminates quantization noise from an output of said quantizer; and

a compensator that has an inverse characteristic of said low pass filter or a characteristic approximating thereto and performs compensation of a feedback amount of said negative feedback signal; and

~~The amplification apparatus according to claim 1, wherein: said powersupply voltage control section further comprises~~

a detector that extracts said second input signal component from an output of said high-frequency power amplification section, wherein ; and

said compensator performs compensation and feedback of part of an output of said detector.

5. (Canceled).

6. (Currently Amended) An amplification apparatus that has a nonlinear high-frequency power amplifier that amplifies a first input signal; and a power supply voltage control section that forms a control signal for controlling a power supply voltage of said high-frequency amplifier based on a second input signal; and that amplifies a signal level of said first input signal by way of said high-frequency power amplifier to a level in accordance with said second input signal, wherein said power supply voltage control section comprises:

an adder that adds together said second input signal and a negative feedback signal;

an integrator that integrates an output of said adder;

a quantizer that quantizes an output of said integrator in accordance with a predetermined threshold value;

a low pass filter that eliminates quantization noise from an output of said quantizer; and

a compensator that has an inverse characteristic of said low pass filter or a characteristic approximating thereto and performs compensation of a feedback amount of said negative feedback signal; and

~~The amplification apparatus according to claim 1, wherein: said power supply voltage control section further comprises~~

an input selection section that selectively inputs either said second input signal or a fixed voltage, wherein ~~;~~ and

operation of said power supply voltage control section is switched between operation as a class D amplifier and operation as a DC-DC converter in accordance with input switching of said input selection section.

7. (Currently Amended) The amplification apparatus according to claim 6, wherein said high-frequency power amplification section has a switching operation mode and a linear operation mode, and executes linear operation mode when said power supply voltage control section operates as the ~~a~~ DC-DC converter.

8. (Canceled).

9. (Currently Amended) An amplification apparatus that has a nonlinear high-frequency power amplifier that amplifies a first input signal; and a power supply voltage control section that forms a control signal for controlling a power supply voltage of said high-frequency amplifier based on a second input signal; and that amplifies a signal level of said first input signal by way of said high-frequency power amplifier to a level in accordance with said second input signal, wherein said power supply voltage control section comprises:

an adder that adds together said second input signal and a negative feedback signal;

an integrator that integrates an output of said adder;

a quantizer that quantizes an output of said integrator in accordance with a predetermined threshold value;

a low pass filter that eliminates quantization noise from an output of said quantizer; and

a compensator that has an inverse characteristic of said low pass filter or a characteristic approximating thereto and performs compensation of a feedback amount of said negative feedback signal; and

~~The amplification apparatus according to claim 1, wherein: said power supply voltage control section comprises~~

a variable attenuator that has an attenuation factor varying function in a negative feedback loop from said low pass filter toward said adder, wherein ~~; and~~

said quantizer is configured as a variable-output quantizer that has an output level varying function, and operates so that a product of an output level of said variable-output quantizer and an attenuation factor of said variable attenuator is constant.

10. (Currently Amended) The amplification apparatus according to claim 9, wherein said variable-output quantizer comprises an output transistor switch and a power supply regulator, and varies a power supply voltage of said output transistor switch by way ~~means~~ of said power supply regulator.

11. (Canceled).